

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number
WO 03/107492 A1

(51) International Patent Classification⁷: H01R 39/38, H02K 5/14

(21) International Application Number: PCT/US03/18279

(22) International Filing Date: 11 June 2003 (11.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 10/171,180 13 June 2002 (13.06.2002) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 10/171,180 (CON)
Filed on 13 June 2002 (13.06.2002)

(71) Applicant (for all designated States except US): BLACK & DECKER INC. [US/US]; Drummond Plaza Office Park, 1423 Kirkwood Highway, Newark, DE 19711 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ORTT, Earl, M. [US/US]; 103 Crafton Road, Bel Air, MD 21014 (US). SMITH, David, J. [US/US]; 921 Kosciuszko Avenue, Glen Burnie, MD 21060 (US).

(74) Agents: TAYLOR, W., R., Duke et al.; Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

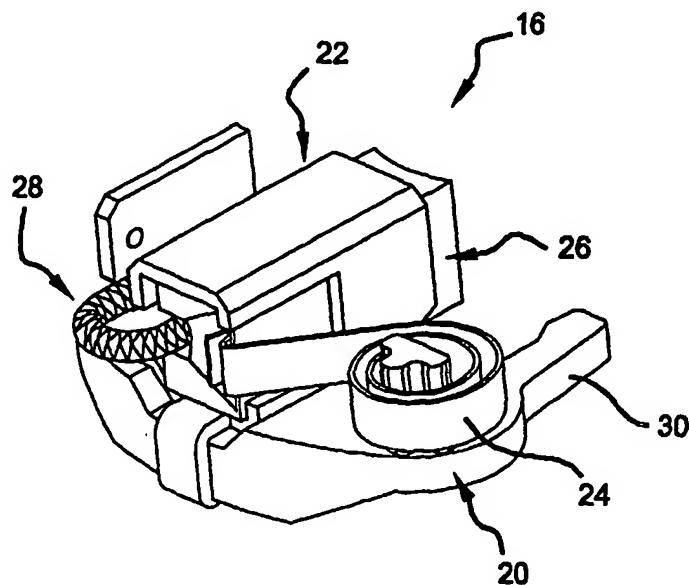
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,

[Continued on next page]

(54) Title: BRUSH ASSEMBLY



(57) Abstract: A brush assembly has a base with a member to secure the base to a motor end cap assembly. A brush housing is associated with the base. The brush housing includes first and second open ends. A brush, defining an axis, is slidably supported within the housing. The brush extends from one of the first and second open ends. The brush includes a surface with a spring retention plunge. The spring retention plunge defines an arcuate face angled relative to the axis. A biasing member exerts a force directly on the arcuate face to bias the brush into contact with a commutator. An electrical connection is made between the commutator and a power supply.